

AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph beginning at page 18, line 11, as follows:

The term "angiogenic" is employed to describe a material that has the characteristic of stimulating the growth of new vascular structures by the host close to a device. For implantable glucose monitoring devices, a sensor/tissue interface must be created which provides the sensor with oxygen and glucose concentrations comparable to that normally available to tissue comprised of living cells. Absent such an interface, the sensor is associated with unstable and chaotic performance indicating that inadequate oxygen and/or glucose are reaching the sensor. The development of suitable interfaces in other contexts has been reported. For example, investigators have developed techniques which stimulate and maintain blood vessels inside a FBC to provide for the demanding oxygen needs of pancreatic islets within an implanted membrane. [See, e.g., Brauker et al., Abstract from 4th World Biomaterials Congress, Berlin (1992)]. These techniques depend, in part, on the use of a vascularizing layer on the exterior of the implanted membrane. However, previously-described implantable analyte-monitoring devices have not been able to successfully maintain sufficient blood flow to the sensor interface.

Please amend the paragraph beginning at page 18, line 24, as follows:

As described above, the outermost layer of the electrode-membrane region comprises an angiogenic material. The angiogenic layer of the devices of the present invention may be constructed of membrane materials such as hydrophilic polyvinylidene fluoride (e.g., Durapore®; Millipore), mixed cellulose esters (e.g., MF; Millipore), polyvinyl chloride (e.g., PVC; Millipore), and other polymers including, but not limited to, polyethylene, polytetrafluoroethylene, cellulose acetate, cellulose nitrate, polycarbonate, nylon, polyester, mixed esters of cellulose polyvinylidene difluoride, silicone, polyacrylonitrile, polypropylene, polysulphone, and polymethacrylate. Preferably, the thickness of the angiogenic layer is about 10 µm to about 20 µm. The angiogenic layer comprises pores sizes of about 0.5 to about 20 µm, and more preferably about 1.0 to about 10 µm, sizes that allow most substances to pass through,

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including, e.g., macrophages. The preferred material is expanded PTFE of a thickness of about
cont. 15 μm and pore sizes of about 5 μm to about 10 μm .